

### **AMENDMENTS OF THE CLAIMS**

Please cancel claims 1, 24, 37, 49-53, 55-61, 63-70 as set forth in the listing of claims that follows.

1-70. **(Canceled)**

71. **(Original)** A NO<sub>x</sub> abatement system comprising:

a heat engine including an in-line series exhaust conduit;

a selective catalytic reduction (SCR) catalyst being disposed downstream from said heat engine in said exhaust conduit, the exhaust conduit including a fluid exhaust flow having a flow direction defined from the heat engine towards, and through said SCR catalyst, said SCR catalyst adapted for storing ammonia;

a first oxidation catalyst disposed in said exhaust conduit intermediate said engine and said SCR catalyst;

a particulate filter disposed in said exhaust conduit intermediate said first oxidation catalyst and said SCR catalyst;

an off-line reactor having an output in direct fluid communication with said exhaust conduit intermediate said particulate filter and said SCR catalyst;

a mixing chamber having an output in direct fluid communication with said off-line reactor;

an off-line reformer having an output in direct fluid communication with said mixing chamber and in direct fluid communication with said exhaust conduit intermediate said heat engine and said first oxidation catalyst and in direct fluid communication with said exhaust conduit intermediate said first oxidation catalyst and said particulate filter;

an off-line burner having a first and a second output, said first output being in downstream fluid communication with said reformer and said second output being direct fluid communication with said mixing chamber; and

a second oxidation catalyst disposed in said exhaust conduit downstream of, and in fluid communication with said SCR catalyst.